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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,411	01/22/2001	Taku Ishizawa	Q62798	9456

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EXAMINER

VO, ANH T N

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/765,411

Applicant(s)

ISHIZAWA ET AL

Examiner

Anh T. N. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 30, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 43-54 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 17-23, 45, and 54 is/are allowed.
- 6) ☒ Claim(s) 12-16, 43, 44, and 46-48 is/are rejected.
- 7) ☒ Claim(s) 49-53 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
-If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 18 6) ☐ Other:

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DETAILED ACTION

Acknowledgement is made of the receipt of Preliminary Amendment filed 30 January 2003.

Continued Prosecution Application

The request filed on 01/30/2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/765,411 is acceptable and a CPA has been established. An action on the CPA follows.

Drawings Object to

The drawings are objected to because the recitation "wherein.....during printing" in claim 44 is not shown on the drawings.

Claim Objection

Claim 5 objected to because of the following informalities: the recitation "the outer shell" on line 7 should be --the outer shell member--. The same is true for claim 54

Claim 17 objected to because of the following informalities: "in" on line 2 and "a recording apparatus" on line 3 should be deleted and changed to --the recording apparatus-- respectively lacks antecedent basis. The same is true for claim 43.

Appropriate correction is required.

CLAIM REJECTIONS

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 12-13, 44, and 46 are rejected under 35 USC 102 (e) as being anticipated by Kimura et al. (US Pat. 4,558,326).

Kimura et al. disclose in Figures 10-11 an ink tank for delivering pressurized ink to a print head comprising:

- an outer shell member (6);
- an ink pack of flexible material (5) storing ink therein, the ink pack being housed in the outer shell member (6);

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- a pressure chamber defined between the outer shell member (6) and the ink pack (5), and adapted to receive the pressurized air produced by the air pressurization pump (94) (Figure 11);
- a pressurized air inlet port (91) provided to the outer shell member (6), wherein the pressurized air supplied from the air pressurization pump (94) is introduced to the pressurized air inlet port (91) (Figures 10-11);
- an ink outlet section (8) which is provided to the ink pack (5), and which enables outflow of ink from the ink pack (5); wherein, when the ink cartridge is removed from a recording apparatus (1), the pressurized air inlet port (91) is released, to thereby bring the pressure chamber in communication with the atmosphere, and the ink outlet section (8) is brought into a closed state (Figure 10);
- 13 wherein the pressurized air inlet port (91) is formed integrally with the outer shell member (6), and includes a cylindrical member which defines an air channel communicating with the pressure chamber (Figure 10);
- the pressurized air inlet port (91) is released when the ink cartridge is removed from the recording apparatus (Figure 10); and
- a sealing member (8A) interposed between the ink outlet section (8) and the outer shell (6) in a radial direction of the ink outlet section (8) (Figure 10).

Claim 43 is rejected under 35 USC 102 (a) as being anticipated by Mochizuki et al. (EP Pat. 0516088).

Mochizuki et al. disclose in Figures 1 and 5 an ink cartridge supplying ink to a print head comprising:

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- an ink cartridge (8) having first and second cases (4, 6) which constitute the cartridge case, said second case (6) is formed from a planar section acting as a cover and a fold section (6a) formed integral with and perpendicular to the planar section (Figure 1);
- at least one lug-shaped member which is formed on the fold section (6a) of the second case (6) (Figure 1); and
- at least one slit (4d) formed through the second case (6) at a location corresponding to the location of the lug-shaped member (6a), said slit extending in a direction parallel to the fold section (Figure 1).

Claims 47-48 are rejected under 35 USC 102 (a) as being anticipated by Sato (JP Pat. 60-198256).

Sato discloses in Figures 2 and 4B an ink tank (10) for supplying pressurized ink to a print head (1) comprising:

- an outer shell member (11) constructed at least by a case and a heat-welding film (11D) (Figure 4B);
- an ink pack (12) of flexible material storing ink therein, the ink pack being housed within the outer shell (11) (Figure 2);
- a pressure chamber (13) defined between the outer shell member (11) and the ink pack (12) and adapted to receive the pressurized air produced by the air pressurization pump (20) (Figure 2); and
- wherein the case and the heat-welding film (11D) are hermetically sealed together by heat-welding.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-16 are rejected under 35 USC 103 (a) as being unpatentable over Kimura et al. (US Pat. 4,558,326) in view of Gasvoda (US Pat. 6,299,296).

Kimura et al. disclose the basic features of the claimed invention were stated above but do not disclose an ink cartridge comprising the ink outlet section which has a valve member, wherein, when the ink cartridge is mounted a recording apparatus, the valve member comes into contact with a connection section of the recording apparatus and recedes in an axial direction, thus becoming open; and wherein, when the ink cartridge is removed from the recording apparatus, the valve member advances in the axial direction, thus sustaining a closed state; wherein the ink outlet section has a spring member for urging the valve member so as to advance in the axial direction; and wherein the ink outlet section is exposed to the outside of the outer shell member by way of an opening section formed in the outer shell member, wherein an O-ring is interposed between the opening section and the ink outlet section, and wherein an engagement member is provided for establishing a sealed state between the opening section and the ink outlet section by pressing the O-ring.

Gasvoda discloses in Figures 1 and 3-4 an ink container using in an ink jet printer comprising:

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- the ink outlet section (64) has a valve member (72), wherein, when the ink cartridge (12) is mounted a recording apparatus (10), the valve member (72) comes into contact with a connection section (44, 50) of the recording apparatus and recedes in an axial direction, thus becoming open (Figures 2 and 4);
- when the ink cartridge (12) is removed from the recording apparatus (10), the valve member (72) advances in the axial direction, thus sustaining a closed state (Figures 2-3);
- wherein the ink outlet section (64) has a spring member (70) for urging the valve member (72) so as to advance in the axial direction (Figures 3-4);
- wherein the ink outlet section (64) is exposed to the outside of the outer shell member (12) by way of an opening section (88) formed in the outer shell member (12), wherein an O-ring (34) is interposed between the opening section (88) and the ink outlet section (64), and wherein an engagement member (30) is provided for establishing a sealed state between the opening section and the ink outlet section by pressing the O-ring (34) (Figures 3-6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Gasvoda in the Kimura ink jet recording apparatus for the purpose of providing a seal member to seal the ink outlet port of the ink cartridge when the ink cartridge being removed from the ink jet recording apparatus.

Allowable Subject Matter

Claims 1-11, 17-23, 45 and 54 are allowable.

Claims 49-52 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an ink cartridge comprising a continuous, substantially planar

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weld surface is formed over the entirety of a peripheral edge of the case, and a heat-welding film which is thermally welded to the weld surface in the combination as claimed.

Claim 53 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an ink cartridge comprising a cover coupled to the case to cover the film, wherein an engagement section removably engaging a peripheral edge of the case is formed integrally on the cover in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (703) 305-8194. The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 5:30 P.M.. The fax number of this Group 2861 is (703) 305-3431 or 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



ANH T.N. VO
PRIMARY EXAMINER

April 24, 2003